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L1 STRUCTURE UPLOADED

=> s l1 ful
FULL SEARCH INITIATED 07:03:27 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 174 TO ITERATE

100.0% PROCESSED 174 ITERATIONS 2 ANSWERS
SEARCH TIME: 00.00.01

L2 2 SEA SSS FUL L1

=> file caplus		
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	ENTRY	SESSION
FULL ESTIMATED COST	167.38	167.59

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FILE COVERS 1907 - 18 Jul 2006 VOL 145 ISS 4
FILE LAST UPDATED: 17 Jul 2006 (20060717/ED)

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=> s l2

L3 5 L2

=> d his

(FILE 'HOME' ENTERED AT 07:01:47 ON 18 JUL 2006)

FILE 'REGISTRY' ENTERED AT 07:02:07 ON 18 JUL 2006

L1 STRUCTURE UPLOADED

L2 2 S L1 FUL

FILE 'CAPLUS' ENTERED AT 07:03:35 ON 18 JUL 2006

L3 5 S L2

=> d l1

L1 HAS NO ANSWERS

L1 STR

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

Structure attributes must be viewed using STN Express query preparation.

=> d bib abs hitstr 1-5

L3 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:376050 CAPLUS

DN 141:184918

TI Cinnamic acid based thiazolidinediones inhibit human P450c17 and
3 β -hydroxysteroid dehydrogenase and improve insulin sensitivity
independent of PPAR γ agonist activity

AU Arlt, Weibke; Neogi, Partha; Gross, Coleman; Miller, Walter L.

CS Department of Pediatrics and the Metabolic Research Unit, University of
California, San Francisco, CA, 94143-0978, USA

SO Journal of Molecular Endocrinology (2004), 32(2), 425-436

CODEN: JMLEEI; ISSN: 0952-5041

PB Society for Endocrinology

DT Journal

LA English

AB Thiazolidinediones improve insulin sensitivity in type 2 diabetes mellitus
by acting as peroxisome proliferator-associated receptor gamma (PPAR γ)
agonists, and decrease circulating androgen concns. in polycystic ovary
syndrome by unknown mechanisms. Some thiazolidinediones directly inhibit
the steroidogenic enzymes P450c17 and 3 β -hydroxysteroid dehydrogenase
type II (3 β HSDII) by distinct mechanisms. We synthesized five novel
thiazolidinediones, CLX-M1 to -M5 by linking a 2,4-thiazolidinedione
moiety to a substituted α -Ph cinnamic acid previously shown to have
glucose-lowering effects. Using yeast microsomes expressing human P450c17
and 3 β HSDII we found that cinnamic acid Me esters with a double bond
in the thiazolidinedione core structure (M3, M5) were stronger inhibitors
of P450c17 than Me esters with the conventional core (M1, M4). These four
compds. inhibited 3 β HSDII equally well, while the free cinnamic acid
analog (M2) did not inhibit either enzyme. Thus, the inhibition of
P450c17 and 3 β HSDII by these novel thiazolidinediones reveals

structure-activity relationships independent of PPAR γ transactivation. PPAR γ transactivation was moderate (M1), weak (M2, M3) or even absent (M4, M5). While the PPAR γ agonist activity of M1 was only 3% of that of rosiglitazone, both increased glucose uptake by 3T3-L1 adipocytes and reduced serum glucose levels in ob/ob and db/db mice to a similar extent. The similar glucose-lowering effects of M1 and rosiglitazone, despite their vast differences in PPAR γ agonist activity, suggests these two actions may occur by sep. mechanisms.

IT 380881-51-6

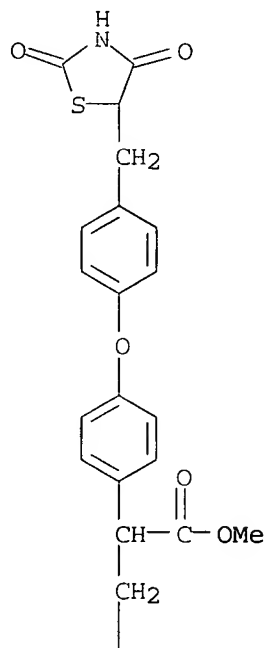
RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); BIOL (Biological study)

(cinnamic acid based thiazolidinediones inhibit human P450c17 and 3 β -hydroxysteroid dehydrogenase and improve insulin sensitivity independent of PPAR γ agonist activity)

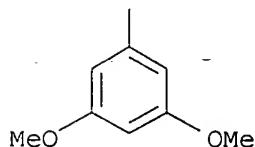
RN 380881-51-6 CAPLUS

CN Benzenepropanoic acid, α -[4-[4-[(2,4-dioxo-5-thiazolidinyl)methyl]phenoxy]phenyl]-3,5-dimethoxy-, methyl ester (9CI)
(CA INDEX NAME)

PAGE 1-A



PAGE 2-A



RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN

CAS ONLINE PRINTOUT

AN 2003:757334 CAPLUS
DN 139:276885
TI Preparation of novel heterocyclic analogs of diphenylethylene compounds as
antidiabetics
IN Neogi, Partha; Dey, Debendranath; Medicherla, Satyanarayana; Nag,
Bishwajit; Lee, Arthur
PA USA
SO U.S. Pat. Appl. Publ., 66 pp., Cont.-in-part of U.S. Ser. No. 843,167.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 9

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003181494	A1	20030925	US 2002-265902	20021008
	US 2002025975	A1	20020228	US 2001-785554	20010220
	US 2002032225	A1	20020314	US 2001-843167	20010427
	CA 2501456	AA	20040422	CA 2003-2501456	20031008
	WO 2004033438	A1	20040422	WO 2003-US31803	20031008
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	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2003282754	A1	20040504	AU 2003-282754	20031008
	EP 1549625	A1	20050706	EP 2003-774638	20031008
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	CN 1708486	A	20051214	CN 2003-80101164	20031008
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	US 2000-591105	B2	20000609		
	US 2001-785554	A2	20010220		
	US 2001-843167	A2	20010427		
	US 1998-74925	A2	19980508		
	US 2002-265902	A	20021008		
	WO 2003-US31803	W	20031008		
OS	MARPAT 139:276885				
GI					

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The title compds. [I; Z = II-IV; n, m, q and r = 0-4 (n+m ≤ 4 and q+r ≤ 4); p, s = 0-5 (p+s ≤ 5); R, R2 = H, alkyl, alkenyl, etc.; R1 = H, alkyl, alkenyl, etc.; A, A1, A2 = H, acylamino, acyloxy, alkanoyl, etc.; B, B1, B2 = H, acylamino, acyloxy, alkanoyl, etc.; or A and B together, or A1 and B1 together, or A2 and B2 together, may be joined to form a methylenedioxy or ethylenedioxy; X, X1 = (un)substituted NH, O, S] which are effective in lowering blood glucose level, serum insulin, triglyceride and free fatty acid levels in animal models of Type II diabetes, were prepared E.g., a multi-step synthesis of V, starting from 3,5-dimethoxybenzaldehyde and 4-hydroxyphenylacetic acid, was given. The compound V showed strong glucose lowering activity even though it is a weak

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PPAR- γ agonist (data given). The compds. I are disclosed as useful for a variety of treatments including the treatment of inflammation, inflammatory and immunol. diseases, insulin resistance, hyperlipidemia, coronary artery disease, cancer and multiple sclerosis. Pharmaceutical composition comprising the compound I was claimed.

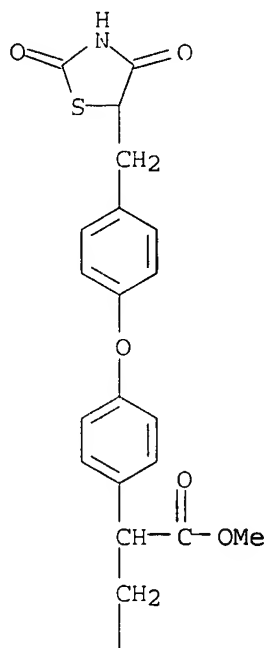
IT 380881-51-6P

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of diphenylethylene compds. containing thiazolidinedione or oxazolidinedione moieties for treating diabetes, inflammatory or immunol. disease in combination with other agents)

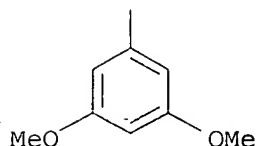
RN 380881-51-6 CAPLUS

CN Benzenepropanoic acid, α -[4-[4-[(2,4-dioxo-5-thiazolidinyl)methyl]phenoxy]phenyl]-3,5-dimethoxy-, methyl ester (9CI)
(CA INDEX NAME)

PAGE 1-A



PAGE 2-A



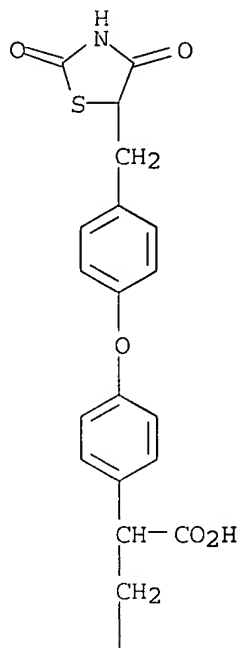
IT 380881-49-2P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

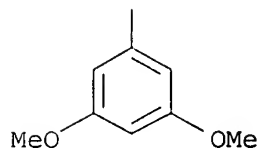
(preparation of diphenylethylene compds. containing thiazolidinedione or oxazolidinedione moieties for treating diabetes, inflammatory or

immunol. disease in combination with other agents)
 RN 380881-49-2 CAPLUS
 CN Benzenepropanoic acid, α -[4-[4-[(2,4-dioxo-5-thiazolidinyl)methyl]phenoxy]phenyl]-3,5-dimethoxy- (9CI) (CA INDEX NAME)

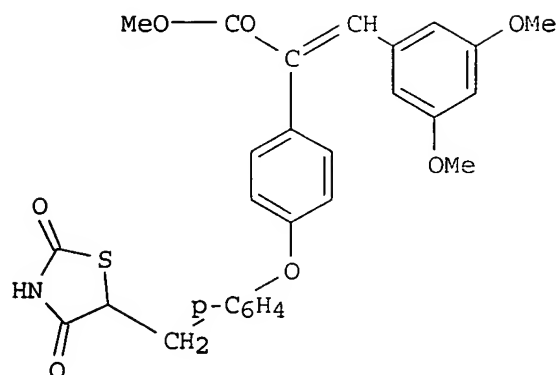
PAGE 1-A



PAGE 2-A



L3 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2003:645701 CAPLUS
 DN 140:87046
 TI Synthesis and structure-Activity relationship studies of cinnamic acid-based novel thiazolidinedione antihyperglycemic agents
 AU Neogi, Partha; Lakner, Fredrick J.; Medicherla, Satyanarayana; Cheng, Jin; Dey, Debendranath; Gowri, Maya; Nag, Bishwajit; Sharma, Somesh D.; Pickford, Lesley B.; Gross, Coleman
 CS Department of Chemistry, Calyx Therapeutics Inc., Hayward, CA, 94545, USA
 SO Bioorganic & Medicinal Chemistry (2003), 11(18), 4059-4067
 CODEN: BMECEP; ISSN: 0968-0896
 PB Elsevier Science Ltd.
 DT Journal
 LA English
 OS CASREACT 140:87046
 GI



I

AB A number of 2,4-thiazolidinedione derivs. of -Ph substituted cinnamic acid were synthesized and studied for their PPAR agonist activity. The E-isomer of cinnamic acid, I, showed moderate PPAR transactivation. The corresponding Z-isomer and double bond reduced derivative were found to be much less potent. Although the E-isomer showed a moderate PPAR γ transactivation, it demonstrated a strong glucose-lowering effect in a genetic rodent model of diabetes. Results of pharmacokinetic, metabolism and permeability studies are consistent with I being an active prodrug with the hydrolyzed carboxylate as an active metabolite that has similar glucose lowering and PPAR γ agonist properties.

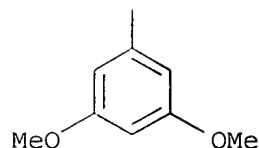
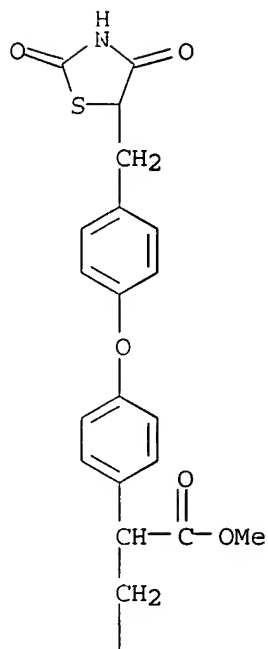
IT 380881-51-6P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(cinnamic acid-based thiazolidinedione antihyperglycemic agents)

RN 380881-51-6 CAPLUS

CN Benzenepropanoic acid, α -[4-[4-[(2,4-dioxo-5-thiazolidinyl)methyl]phenoxy]phenyl]-3,5-dimethoxy-, methyl ester (9CI)
(CA INDEX NAME)



RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:185699 CAPLUS
DN 136:247571
TI Preparation of novel heterocyclic analogs of diphenylethylene compounds as
inhibitors of cytokines or cyclooxygenase
IN Nag, Bishwajit; Dey, Debendranath; Medicherla, Satyanarayana; Neogi,
Partha
PA USA
SO U.S. Pat. Appl. Publ., 34 pp., Cont.-in-part of U.S. Ser. No. 785,554.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 9

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002032225	A1	20020314	US 2001-843167	20010427
	US 6245814	B1	20010612	US 1998-74925	19980508
	US 2002025975	A1	20020228	US 2001-785554	20010220
	CA 2410171	AA	20011220	CA 2001-2410171	20010605
	WO 2001095859	A2	20011220	WO 2001-US17950	20010605
	WO 2001095859	A3	20030828		

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AU 2001066670 A5 20011224 AU 2001-66670 20010605

EP 1360178 A2 20031112 EP 2001-944241 20010605

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR

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CN 1537002 A 20041013 CN 2001-820445 20010605

NZ 522660 A 20050527 NZ 2001-522660 20010605

US 2003181494 A1 20030925 US 2002-265902 20021008

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US 2000-591105 A2 20000609

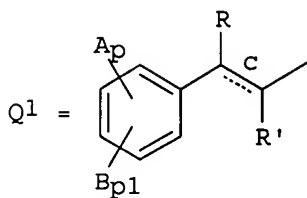
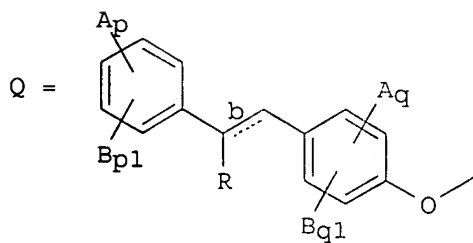
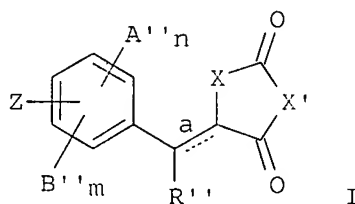
US 2001-785554 A2 20010220

US 2001-843167 A 20010427

WO 2001-US17950 W 20010605

OS MARPAT 136:247571

GI



AB Novel diphenylethylene compds. and derivs. thereof containing thiazolidinedione or oxazolidinedione-moieties are provided which are effective in lowering blood glucose level, serum insulin, triglyceride and free fatty acid levels in animal models of Type II diabetes. The above compds. and their derivs. are resented by formula [I; Z = Q, Q1, H, A", B"; wherein n, m, q, q1 = integers from zero to 4 provided that n+m≤4 and q+q1≤4; p, p1 = integers from zero to 5 provided that p+p1≤5; a, b and c are double bonds which may be present or absent; when present; the double bonds may be in the E or Z configuration and, when absent, the resulting stereocenters may have the R- or S-

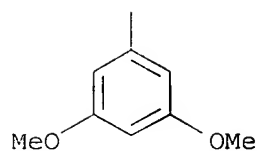
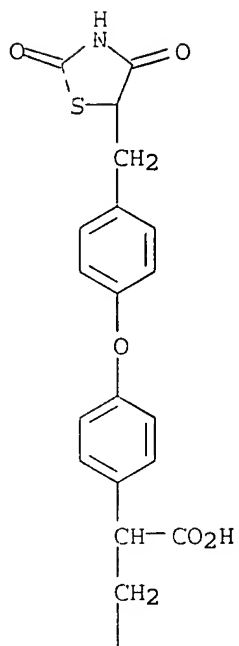
configuration; R, R', R'' = H, C1-20 linear or branched alkyl, C2-20 linear or branched alkenyl, CO₂Z' (wherein Z' = H, Na, K, or other pharmaceutically acceptable counterion such as Ca, Mg, ammonium, tromethamine, and the like), CO₂R''', NH₂, NHR''', N(R''')₂, OH, OR''', halo, substituted C1-20 linear or branched alkyl or substituted C2-20 linear or branched alkenyl (wherein R''' is C1-20 linear or branched alkyl or linear or branched alkenyl); A, A', A'' = H, C1-20 acylamino, C1-20 acyloxy, C1-20 alkanoyl, C1-20 alkoxycarbonyl, C1-20 alkoxy, C1-20 alkylamino, C1-20 alkylcarboxylamino, CO₂H, cyano, halo, HO; B, B', B'' = H, C1-20 acylamino, C1-20 acyloxy, C1-20 alkanoyl, C1-20 alkenoyl, C1-20 alkoxycarbonyl, C1-20 alkoxy, C1-20 alkylamino, C1-20 alkylcarboxylamino, aroyl, aralkanoyl, CO₂H, cyano, halo, HO; or A and B together, or A' and B' together, or A'' and B'' together, may be joined to form a methylenedioxy or ethylenedioxy group; and X, X' are independently -NH, -NR''', O or S]. In contrast to previously reported thiazolidinedione compds., known to lower leptin levels, the present compds. increase leptin levels and have no known liver toxicity. They inhibit the activity of TNF- α , interleukin IL-1 or IL-6 or cyclooxygenase-2 (COX-2). The compds. are disclosed as useful for a variety of treatments including the treatment of inflammation, inflammatory and immunol. diseases, insulin resistance, hyperlipidemia, coronary artery disease, cancer and multiple sclerosis. Thus, To a mixture of 3,5-dimethoxybenzaldehyde (500 g) and p-hydroxyphenylacetic acid (457 g) was added acetic anhydride (1 L) and triethylamine (420 mL) and the nonhomogeneous mixture on heating became homogeneous at 70° and stirred at 130-140° for 6 h to give 47% 3-(3,5-dimethoxyphenyl)-2-(4-hydroxyphenyl)acrylic acid (II) (428 g). II (427.5 g) was suspended in 3 L methanol, treated with 100 mL concentrated H₂SO₄, and heated at reflux for 20 h under Ar to give 97% 3-(3,5-dimethoxyphenyl)-2-(4-hydroxyphenyl)acrylic acid Me ester (III). III (433 g) was dissolved in 1.6 L DMF, treated with 60.4 g NaH (50% in oil) and the with 185 mL p-fluorobenzaldehyde, and heated at 180° for 18 h to give 77% 3-(3,5-dimethoxyphenyl)-2-[4-(4-formylphenoxy)phenyl]acrylic acid Me ester which (352 g), 2,4-thiazolidinedione 98.6, benzoic acid 134, and piperidine 107.4 g were heated in 2.5 L toluene at reflux with continuous removal of H₂O through Dean-Stark apparatus to give 86% 3-(3,5-dimethoxyphenyl)-2-[4-[4-(2,4-dioxothiazolidin-5-ylidene)methyl]phenoxy]phenyl]acrylic acid Me ester (IV). IV (30 g) was hydrogenated over 15 g 10% Pd-C in 900 mL dioxane in a Parr apparatus at 60 Psi for 24 h, followed by adding 15 g 10% Pd-C and continuing the hydrogenation for another 24 h to give 86% 3-(3,5-dimethoxyphenyl)-2-[4-[4-(2,4-dioxothiazolidin-5-ylmethyl)phenoxy]phenyl]acrylic acid Me ester (V). When V was orally administered to ob/ob mice with a single oral dose (50 mg/kg body weight), there was a 62 % drop in blood glucose level and, similar to db/db mice, there was no significant increase in body weight between the control and the treatment groups. This was in contrast to treatment of diabetic animals by thiazolidinedione type compds. which are known to be associated with increase in body weight

IT 380831-49-2P, 3-(3,5-Dimethoxyphenyl)-2-[4-[4-(2,4-dioxothiazolidin-5-ylmethyl)phenoxy]phenyl]propionic acid
 380831-51-6P, 3-(3,5-Dimethoxyphenyl)-2-[4-[4-(2,4-dioxothiazolidin-5-ylmethyl)phenoxy]phenyl]propionic acid methyl ester
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

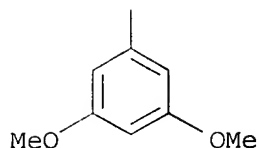
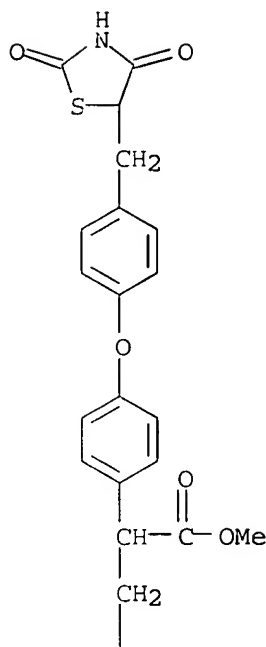
preparation of novel heterocyclic analogs of phenylethylene compds. as inhibitors of cytokines or cyclooxygenase for therapeutic agents)

RN 380831-49-2 CA:BUS

CN Benzenepropanoic acid, 3-[4-[4-[(2,4-dioxo-5-thiazolidinyl)methyl]phenoxy]phenyl]-3,5-dimethoxy- (9CI) (CA INDEX NAME)



RN 380481-51-6 CAPLUS
 CN Benzenepropanoic acid, α -[4-[4-[(2,4-dioxo-5-thiazolidinyl)methyl]phenoxy]phenyl]-3,5-dimethoxy-, methyl ester (9CI)
 (CA INDEX NAME)



L3 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2001:923567 CAPLUS
 DN 136:37596
 TI Preparation and activity of diphenylethylene thiazolidinedione or
 oxazolidinedione compounds as antidiabetics or antiinflammatories
 IN Neogi, Partha; Nag, Bishwajit; Medicherla, Satyanarayana; Dey,
 Debendranath
 PA Calyx Therapeutics, Inc., USA
 SO PCT Int. Appl., 76 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 9

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001095859	A2	20011220	WO 2001-US17950	20010605
	WO 2001095859	A3	20030828		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
 CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
 GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
 LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT,
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 UZ, VN, YU, ZA, ZW

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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AM, AZ, BY, KG,
KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR,
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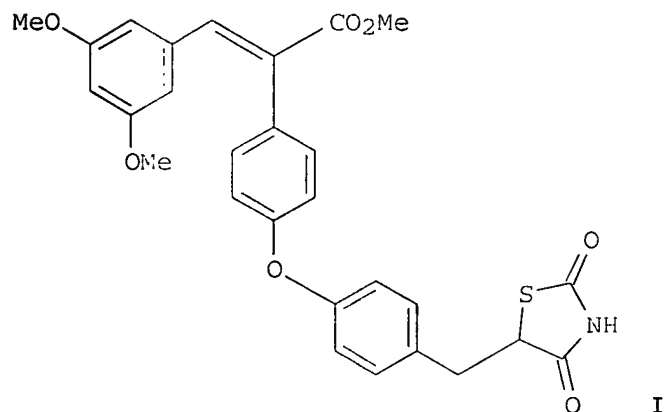
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US 2002032225	A1	20020314	US 2001-843167	20010427
CA 2410171	AA	20011220	CA 2001-2410171	20010605
AU 2001066670	A5	20011224	AU 2001-66670	20010605
EP 1360178	A2	20031112	EP 2001-944241	20010605

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, FI, CY, TR

JP 2004527455	T2	20040909	JP 2002-510041	20010605
NZ 522660	A	20050527	NZ 2001-522660	20010605

PRAI US 2000-591105	A2	20000609
US 2001-785554	A2	20010220
US 2001-843167	A2	20010427
US 1998-74925	A2	19980508
US 1999-287237	A2	19990406
WO 2001-US17950	W	20010605

OS MARPAT 136:37596
GI



AB Novel diphenylethylene compds. and derivs. thereof containing thiazolidinedione or oxazolidinedione moieties are provided which are effective in lowering blood glucose level, serum insulin, triglyceride and free fatty acid levels in animal models of Type II diabetes. In contrast to previously reported thiazolidinedione compds., known to lower leptin levels, the present compds. increase leptin levels and have no known liver toxicity. Thus, (I) was prepared in five steps by condensation of 3,5-dimethoxybenzaldehyde with 4-hydroxyphenylacetic acid followed by esterification and etherification with 4-fluorobenzaldehyde and condensation with 2,4-thiazolidinedione and hydrogenation of the ylidene double bond. Oral administration of I to obese mice caused a 62% drop in blood glucose level. The compds. are disclosed as useful for a variety of treatments including the treatment of inflammation, inflammatory and immunol. diseases, insulin resistance, hyperlipidemia, coronary artery disease, cancer and multiple sclerosis.

IT 380831-49-2P 380-31-51-6P

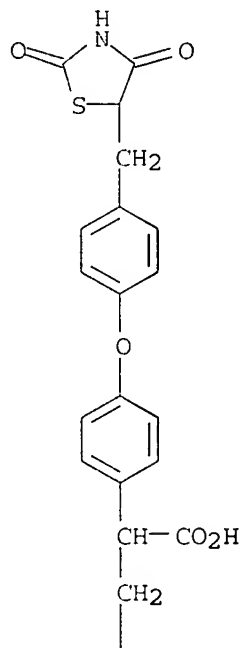
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation and activity of diphenylethylene thiazolidinedione or
oxazolidinedione compds. as antidiabetics or antiinflammatories)

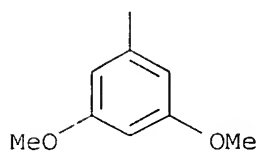
RN 380831-49-2 CAPLUS

CN Benzenepropanoic acid, α -[4-[4-[(2,4-dioxo-5-
thiazolidinyl)methyl]phenoxy]phenyl]-3,5-dimethoxy- (9CI) (CA INDEX NAME)

PAGE 1-A

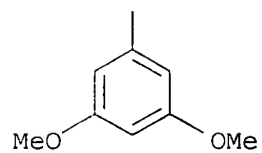
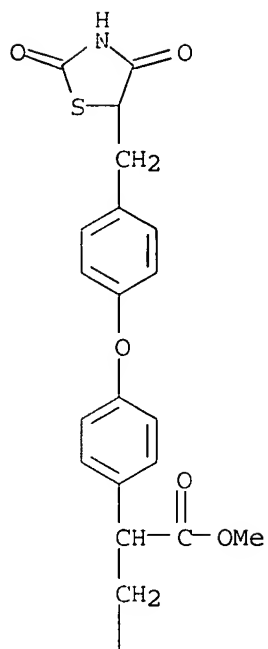


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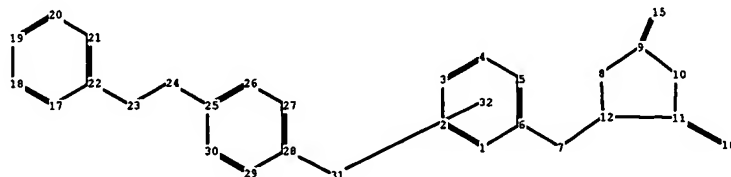
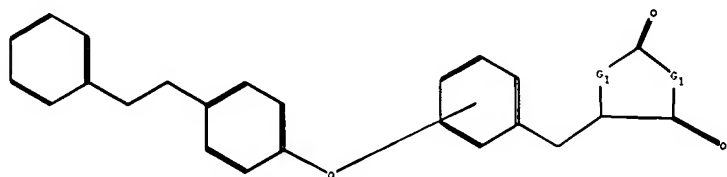


RN 380881-51-6 CAPLUS

CN Benzenepropanoic acid, α -[4-[4-[(2,4-dioxo-5-
thiazolidinyl)methyl]phenoxy]phenyl]-3,5-dimethoxy-, methyl ester (9CI)
(CA INDEX NAME)



L1



chain nodes :

7 15 16 23 24 31

ring nodes :

1 2 3 4 5 6 8 9 10 11 12 17 18 19 20 21 22 25 26 27 28
29 30

chain bonds :

6-7 7-12 9-15 11-16 22-23 23-24 24-25 28-31

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 8-9 8-12 9-10 10-11 11-12 17-18 17-22
18-19 19-20 20-21 21-22 25-26 25-30 26-27 27-28 28-29 29-30

exact/norm bonds :

6-7 7-12 8-9 8-12 9-10 9-15 10-11 11-12 11-16 22-23 23-24 24-25
28-31

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6 17-18 17-22 18-19 19-20 20-21 21-22
25-26 25-30 26-27 27-28 28-29 29-30

G1:O,S,N

Match level :

1:Atom	2:Atom	3:Atom	4:Atom	5:Atom	6:Atom	7:CLASS	8:Atom	9:Atom
10:Atom	11:Atom	12:Atom	15:CLASS	16:CLASS	17:Atom	18:Atom	19:Atom	
20:Atom	21:Atom	22:Atom	23:CLASS	24:CLASS	25:Atom	26:Atom	27:Atom	
28:Atom	29:Atom	30:Atom	31:CLASS	32:Atom				

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